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Government vs. Private Financing of the Railroad Industry

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## Abstract

In the past, with few exceptions, the railroad industry has been financed and its economic performance evaluated on strictly private-sector standards. Competing forms of transport have been in large part government financed, and to some extent, especially waterways, subsidized. Optimality in the transport system can be attained only if governments -- Federal, state, local -- treat all forms of transport equally. This necessitates governmental participation in the financing of the railroad industry, both in the provision of capital and the financing of deficits in some instances. At present, the railroads are subject to an interest burden on track improvements, whereas there is no similar burden on highway and waterways carriers. Further support for governmental participation is provided by the important externalities offered by rail service, the need for insuring survival of railroads in periods of depression, the meeting of deficits on lines with marginal cost less than average cost but nevertheless economically justifiable, the urgency for drastic revision of labor contracts, which the railroads are probably not able to do alone, and aid in restructuring of the rail network.

Some progress has been made along these lines in the last decade; the present administration, however, is returning to the old private-sector standards, unsympathetic to governmental participation in the areas noted. Only with regard to increased user charges on competing transport, deregulation, and attitudes toward labor is the new administration sympathetic to a solution of the rail problems.





## GOVERNMENT VS. PRIVATE FINANCING OF THE RAILROAD INDUSTRY\*

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This paper is concerned with financing of the railroad industry in two respects: (1) the provision of capital, and (2) the meeting of deficits. By "government" is meant not only the Federal government but the states and local governments as well. The first portion of the paper outlines the optimal role of government in financing of the railroad industry, the second part the prospects for attainment of the optimum. Under the present political environment, the gap is extremely wide. But political environments change over time.

The basic philosophy of the paper is that optimal efficiency in freight transportation in the United States requires that the railroads be treated, so far as the role of government in financing is concerned, in a fashion as close as possible to that of the trucking and barge industries, after recognition of inherent differences among the industries. It is obvious that Pareto optimality cannot be attained unless this rule is followed. The philosophy is widely accepted in principle; it has been widely violated in practice. Since government financing occurs with both highways and waterways, and this is almost certain to continue, government participation in financing of the railway industry is essential for equality of treatment. But historically the railroads have been regarded as wholly in the private sector (with a few exceptions such the provision of land grants in the last century), while highways and waterways have been almost exclusively in the public sector. Thus railway investment has been evaluated on private sector profit making rules almost entirely, except to a limited extent in recent years, while highways and waterways have not.

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## The Justifications for Governmental Participation in Railroad Financing

There are several justifications for governmental participation in the financing of the railroad industry.

### 1. Equality of treatment with competing industries.

Waterway improvements have been universally financed by the Federal government, a tradition dating back for nearly two centuries. These have been financed, as is usual with the Federal government, out of current revenues. Until the last two years, the users have paid nothing for the use of waterways, and the present charges are nominal. Partly because of the absence of charges, waterways improvements have enjoyed very strong lobbying support from farm groups and other bulk shippers, localities benefitting, and the Corps of Army Engineers. For decades some of the improvements--and the Columbia River was an extreme example--did nothing more than pull down rail rates.<sup>1</sup> Traffic continued to move by rail, and the investments constituted complete economic waste. The overall ultimate result has been to lower, artificially, the costs of barge transport, shifting a substantial amount of traffic from the railways, and depressing many rail rates to the point at which they contribute little to common costs.

Likewise, highways have been built by governments. Unlike waterways, truck lines have contributed substantially to the support of highway costs, although most studies suggest that the large vehicles are not paying adequate amounts relative to the additional costs for which they are responsible. Furthermore, with both highways and waterways, no interest burden is incurred by the carriers for the improvements. While waterway and highway improvements are typically financed from current government revenues, a real interest burden is incurred, in the sense that the revenues used to finance the improvements could have been placed in income yielding investments if they had not been used for the transport improvements.

1. J.F. Due, Rails to the MidColumbia Wheatlands (Washington, D.C.: University Press of America, 1970)

By contrast, the railroads must provide their own capital for replacements and improvements. If these sums are financed by earned depreciation reserves or profits, interest earnings are foregone; if not, a contractual interest burden is assumed. With interest rates held artificially high by Federal Reserve policy, the capital problem is particularly severe. A Department of Transportation study in 1978 showed a potential shortfall of capital in the railroad industry of between \$13 and \$16 billion dollars over the 1979-80 period.<sup>1</sup> The National Transportation Policy Study Commission concluded that capital requirements from 1976 to 2000 (in 1975 dollars) would range between \$116.7 billion and \$332.8 billion.<sup>2</sup> Without governmental participation, investment in railway improvements will be artificially low compared to that in waterways and highways.

Under one proposal the government would buy and maintain the railway track, charging the railroads for the use on a competitive bid basis.<sup>3</sup> On a nationwide scale, this approach would involve large Federal outlays. But the more serious question is the inevitable conflict between the government as owner of the lines and the railroads as operators on them, and the determination of maintenance expenditures by area and line on the basis of political considerations. Competition among several lines operating on the same line is impossible, since it is not technically feasible to allow a number of railroads to operate on the same track, as experience has demonstrated very clearly. Even with two lines and with voluntarily negotiated agreements there have been problems, particularly over train priorities.

While widespread Federal ownership of the rail lines is open to serious question, state or local government purchase of deteriorated lines which have

1. A Prospectus for Change in the Railroad Freight Industry (Washington: 1978)
2. National Transportation Policy through the Year 2000 (Washington: 1979).
3. For example, Bruce Hannon, "A Railway Trust Fund," Transportation Research Vol. 8 (1974) pp. 363-72; D.P. Ainsworth and P.V. Stone, Public Ownership of Fixed Plant (Greenwich, Conn.: Reebie Associates, 1979); M.J. Hirschey, Government Ownership and Operation of Railroad Rights of Way: Pros and Cons (Madison: Wisconsin Department of Transportation, 1975).



economic justification, with rehabilitation and transfer to local companies for operation, has merit, particularly in insuring to shippers that the state or local government is serious about ensuring continued operation of the line.

An alternative to government participation in the financing of the railroad industry because of the governmental role in financing competing forms of transport would of course be to reduce government expenditures in the other industries and require the users to pay a larger share of the costs. By the nature of waterways and highways, it is difficult to envisage turning them over to private enterprise and elimination of the interest-free phenomenon. There is of course strong merit in requiring the highway and waterway users to pay larger sums--particularly the latter. But there are serious political obstacles to implementation of this approach. Even if this is done, as the administration justifiably proposes, there is still a case for Federal participation in the financing of the railways on the basis of competitive relationships.

## 2. Externalities

A major argument for governmental participation in railroad financing, as defined, is based upon the significant externalities from the preservation of rail service.

One important externality is the lessening of congestion on the highways, particularly routes in and near metropolitan areas and connecting major cities. The growing truck traffic has added significantly to congestion on many of these routes, with substantial discomfort for automobile drivers and increased accidents. U.S. 94 across southern Michigan is a good example, as well as interstates leading out of Chicago in peak periods. This feature has received virtually no attention in the framing of transport policy. The problem is aggravated by the increased size of trucks concurrent with the decline in the size of the average automobile. At the same time, the rapid increase in truck traffic has clearly contributed to the deterioration of the interstates at a much more rapid rate than expected.<sup>1</sup> The congestion

1. This has been widely recognized. Note for example, "Deterioration of the Nation's Roads Accelerates," Wall Street Journal, Oct. 15, 1981, p. 48. Note also U.S. General Accounting Office, "Excessive Truck Weight--An Expensive

leads to demands for spending large sums of money on widening the interstates and expressways, with the concomitant negative externalities.

A second externality is that of energy consumption and pollution. Various studies generally have shown that rail, with any significant of volume of traffic, is more energy efficient than trucking, and thus is less vulnerable to potential increases in petroleum product prices and contributes less to pollution, for a given volume of traffic.<sup>1</sup> A few studies have questioned this conclusion if all energy use in the railroad industry is taken into consideration,<sup>2</sup> but there appears to be strong evidence that on the whole rail is more efficient. In recent months the rise in oil prices has stopped, and prices have even come down a little. But we may be living in a fool's paradise; international incidents could easily trigger off another sharp rise and shortages.

Since congestion and energy-pollution issues are Federal in nature, some Federal participation in financing of the railway industry is warranted. At the state-local level, however, there are additional externalities. Loss of a railroad line can cause economic loss to the area and preclude further development of types that will not locate in an area without rail service. There is strong evidence that most rail abandonments in the past have had very little impact on the areas served<sup>3</sup>--but most of these were submarginal lines that had no economic significance. But widespread abandonment of present lines may result in far more serious adverse effects. No one questions that substantial abandonment of rail mileage and concentration of traffic on remaining lines is imperative. But state rail plans show clearly that

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1. For example, E. Gregory, "Intermodal Fuel Consumption," U.S. Department of Energy, 1980.

2. T. Doggett and Assoc., "Further Development and Use of the Transportation Energy Conservation Network, Final Report," McLean, Va.: International Research + Technology Corp., 1975.

3. J.F. Due and B. Allen, "Railway Abandonment: Effects on the Areas Served," Growth and Change, Vol. 8 (April 1977), pp. 8-14.



some lines slated for abandonment offer benefit/cost ratios of preservation far in excess of one.<sup>1</sup> The abandonment is sought because the present owners are short of capital and wish to concentrate their efforts on their more profitable routes, or because profitable segments are not connected to other viable portions of the system. State-local effort to preserve these lines, with transfer to local operation, is strongly justified, as well as the use of public funds to aid in the transfer and rehabilitation. Federal participation in such financing may also be justified on the grounds that maintenance of an economic overall rail network has national implications, and in some instances, because of interstate complications, Federal action may be necessary to attain the desired results.

### 3. Survival in a Depression

Should the economy continue to slip into a depression, many railroads will be in serious financial condition; thus far most have been saved by heavy coal and grain movements and gains from partial deregulation. But for the government to allow wholesale liquidation of rail lines that are viable from a long range standpoint but are unable to withstand a serious depression would be intolerable from the standpoint of economic efficiency.

### 4. Lines with Marginal Cost Less than Average Cost

The work of Theodore Keeler and Robert Harris over recent years has confirmed what has long been believed--but denied by earlier misspecified analysis--that the economies of scale continue up to a very high volume of traffic, approached by not more than 25 percent of the rail network of the country.<sup>2</sup> Thus on most of the rail network, marginal cost is less than average cost. The difference is probably not very significant on much of the mileage but

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1. J.F. Due, "State Rail Plans and Programs," Quarterly Review of Economics and Business, Vol. 19 (Summer 1979), pp. 109-30, and "State Rail Planning in the Southwest," Texas Business Review, Vol. 54 (July-August 1980), pp. 187-92.

2. R.G. Harris, "Rationalizing the Rail Freight Industry," Working Paper SL 7705, Dept. of Economics, University of California, Berkeley, 1977.

is substantial on the lighter traffic lines whose continuation is justified on a benefit-cost basis. This situation is a classic example of the old toll-bridge problem, and the answers are not simple and obvious. Economic optimality requires that the rate level equal marginal cost--but this will result in deficits. In the past the railroads solved this problem by value of service rate making--a second best approach under any circumstances, and one whose continuation was made impossible by the rise of trucking. The problem is most acute on long, relatively light traffic lines, but with enough traffic to justify their continuation on a benefit-cost basis. The overall cost level of the railroad is increased, with a tendency to hold rates on other lines higher than necessary to cover all costs on those lines. Accordingly, government financing, in one form or another, is warranted to allow rates on heavy traffic routes approximating long run average and marginal cost on those routes.

#### 5. Labor--Key to Improved Earnings

There is increasing evidence that the railroad industry could, as a whole, earn a reasonable return, with many of the lines now submarginal being able to cover their costs, with drastic revision of labor union contracts to increase labor productivity and bring wage costs to levels comparable to those in other industries.<sup>1</sup> Further reduction in crew size, payment upon an 8 hour day basis regardless of miles, elimination of division seniority, and much broader flexibility in the type of work that a worker does are essential. The noncompetitive labor costs result from a series of sources: reluctance of management to press hard for changes, lack of adequate foresight on the part of union officials, and the obsolete craft form of organization. The weaker roads would be unable to withstand a strike if they forced a change; the more profitable roads do not want to impair

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1. One of the few good analysis of this problem is to be found in U.S. National Commission on Productivity and the Council of Economic Advisers, Improving Railroad Productivity (Washington, D.C.: 1973).

their short run profits. But much of the blame rests with the Federal government, which consistently supported the labor position and included in the CONRAIL legislation provisions that prevented attainment of the desired restructuring and greatly impeded the ability of CONRAIL to operate profitably. Some states added to the problem by economically idiotic full crew laws.

Governmental assistance for a breakthrough in the restructuring of labor contracts is imperative. One approach is governmental provision of reasonable severance pay for workers losing their jobs through operating changes and abandonment. A second is the use of subsidy to force changes in labor agreements. A very promising step was taken in the so-called CONRAIL conciliation agreement in the summer of 1981.<sup>1</sup> There is evidence that the unions are coming to recognize that change is imperative, at least on the weaker roads--but they must go much farther if the industry is to be viable. The alternative may well be widespread loss of jobs.

#### 6. Aid in Reorganizing the Structure of the Railroad System

Finally, governmental assistance, involving some financing, is desirable to aid in the restructuring of the rail system of the country in an optimal fashion. One aspect is consolidation of traffic on a smaller number of main lines. If this is left strictly to the market, the results may not be economically optimal. Five lines between Chicago and Omaha were excessive--the worst example of duplication in the country.<sup>2</sup> But the first of the five to fall by the wayside was the Rock Island's line, as this was the weakest road, financially. But it is not obvious that this was the route that should have gone first; it was the only direct line through Des Moines and served other major shipping points as well.

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1. Omnibus Reconciliation Act of 1981.

2. There were originally six, until the Great Western was absorbed by the Chicago + Northwestern and the main route dismembered.



In addition, as noted above, there is substantial mileage that probably can be operated profitably by local companies but not by the major systems. Some assistance for the transfer, plus some funds for rehabilitation, may be essential for the transfers. This may be primarily a state-local matter--but some Federal participation can be justified.

#### Summary of Proposals

Basic to the recommendations is the acceptance of the philosophy that the railway industry cannot be left entirely to the market mechanism, given governmental participation in highway and waterway financing and operation, external and the increasing returns nature of the railway industry. Specifically, the following recommendations are offered:

1. Governmental provision of low interest rate capital to the railway industry, to restore equality of capital with water and road transport.
2. State-local acquisition of light traffic lines with a benefit/cost ratio adequately in excess of one, provision of funds for rehabilitation, and assistance for continued operation when needed.
3. Federal assistance for reconstruction of the rail network, with consolidation of traffic on a smaller number of main lines and transfer of light traffic routes to local entities.
4. Provision of Federal and state funds for improvement of lines to allow higher quality service to lessen truck-induced congestion on the highways.
5. Continuing financial aid for light traffic lines where marginal cost is less than average cost and the benefit/cost ratio is adequately high.
6. Provision of Federal assistance to rail lines in a severe depression.
7. Federal and state pressure via the subsidy requirements, Federally-provided severance pay, and other means to bring imperative changes in labor contracts.

In the establishment of systems of financial aid, it is obvious that they must be designed in such a way that (1) they do not merely cover deficits, encouraging inefficiency, and (2) they do not preserve uneconomic provisions in labor agreements and wage levels above those for comparable work.

### The Obstacles to the Attainment of Optimality

Several years ago there was cause for optimism for improvements in government policy toward railway financing--except for the policies toward labor agreements. Today there is much less optimism, except for tax concessions,<sup>1</sup> shifting policy with regard to labor, and the greater rate freedom for the carriers under the Staggers Act, which should to some extent improve their financial position.

The current trend is toward reaffirmation of the old rule that the railroads are strictly private sector enterprises, to be judged on the criteria of the private sector--make a profit, or quit, without governmental assistance. This is reflected in the attempt of the administration to eliminate the Rail Services Assistance program, of great importance in retaining lines that offer a benefit/cost ratio in excess of one but whose main line owners are unwilling to continue them and in the transition to local operation. The determination of the administration to return CONRAIL to private ownership, either as a unit or through liquidation and sale of parts is a further example, as are the policies toward AMTRAK. Congress has served as a restraining influence to some degree.

This negative attitude toward governmental participation in financing and in operation is partly a reflection of the influence of some prominent economists in the field, such as James Miller, George Hilton, and others, and the proposals of the National Transportation Policy Study Commission.<sup>2</sup>

The attitude was held by some officials of DOT under the Carter administration.

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1. 1981 tax legislation allows the railroads to write off for tax purposes \$8 billion of track, saving the railroads up to \$3 billion in tax over the next five years. Wall Street Journal, Oct. 27, 1981, p. 25.



But basically it is a product of several major tenets of the Reagan administration:

1. All businesses, rail or otherwise, should stand on their own; if they are not profitable they should liquidate. Railroads are no different--or not much different--from any other business--truck lines, automobile manufacturers, fast food restaurants, furniture stores.

2. For ideological reasons, governments should not operate any type of commercial activity.

3. The implicit denial of externalities--of gains to society from retention of an effective rail system. In most respects externalities are foreign to the thinking of the Chicago school, the philosophical underpinning of the present administration.

4. The all-consuming objective of cutting the Federal budget--with rail transportation a prime target from the beginning of implementation of the administration's policies. Closely related is the determination to balance the budget--in the belief--probably mistaken--that this will end inflation and stimulate investment.

5. There appears to be an anti-rail bias in administration policy, reflected in the hostile attitude toward AMTRAK and the denial of funds for rail rapid transit projects, as well as the aspects noted above.

At the state-local level, a major obstacle is the resistance to present tax levels and tax increases (the proposition 13 philosophy), coupled with the deteriorating state and local financial position, which results from the current decline in economic activity, high interest rates, and reduced Federal assistance to the states. Some states--including traditionally conservative ones such as New Hampshire and South Dakota--have acted vigorously in this field. But state action over the next several years is certain to be restricted by budgetary constraints.

On the whole, the outlook is not promising. Rate deregulation and the surprising initiative of local entrepreneurs interested in taking over abandoned lines are the only promising elements in an otherwise discouraging picture. The danger is serious erosion of the rail system before administrations and attitudes change again.

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